SANTA CRUZ BIOTECHNOLOGY, INC.

NCDN (N-13): sc-160572

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

NCDN (neurochondrin) is a 729 amino acid leucine-rich cytoplasmic protein belonging to the neurochondrin family that is involved in nervous system signal transduction and required for spatial learning. Known to act as a negative regulator of CaMKII (Ca^{2+}-calmodulin-dependent protein kinase 2) phosphorylation, NCDN may also associate with MCH-1R (melanin-concentrating hormone receptor 1) to modulate its function, and is suggested to play a role in bone metabolism, neurite outgrowth and chondrocyte differentiation. Due to alternative splicing events, three NCDN isoforms are known to exist which are highly expressed in adult brain and spinal cord, and found at lower levels in fetal brain, ovary and testis. Localizing to somatic regions of neurons, NCDN is encoded by a gene that maps to human chromosome 1p34.3 and mouse chromosome 4 D2.2.

REFERENCES

1. Nagase, T., Ishikawa, K., Miyajima, N., Tanaka, A., Kotani, H., Nomura, N. and Ohara, O. 1998. Prediction of the coding sequences of unidentified human genes. IX. The complete sequences of 100 new cDNA clones from brain which can code for large proteins *in vitro*. DNA Res. 5: 31-39.
2. Mochizuki, R., Ishizuka, Y., Yanai, K., Koga, Y., Fukamizu, A. and Murakami, K. 1999. Molecular cloning and expression of human neurochondrin-1 and -2. Biochim. Biophys. Acta 1446: 397-402.
3. Mochizuki, R., Ishizuka, Y., Yanai, K., Murakami, K., Koga, Y. and Fukamizu, A. 2000. Corrigendum to 'Molecular cloning and expression of human neurochondrin-1 and -2'. Biochim. Biophys. Acta 1490: 367-368.
4. Mochizuki, R., Dateki, M., Yanai, K., Ishizuka, Y., Amizuka, N., Kawashima, H., Koga, Y., Ozawa, H. and Fukamizu, A. 2003. Targeted disruption of the neurochondrin/norbin gene results in embryonic lethality. Biochem. Biophys. Res. Commun. 310: 1219-1226.
5. Dateki, M., Horii, T., Kasuya, Y., Mochizuki, R., Nagao, Y., Ishida, J., Sugiyama, F., Tanimoto, K., Yagami, K., Imai, H. and Fukamizu, A. 2005. Neurochondrin negatively regulates CaMKII phosphorylation, and nervous system-specific gene disruption results in epileptic seizure. J. Biol. Chem. 280: 20503-20508.
6. Wang, H., Westin, L., Nong, Y., Birnbaum, S., Bendor, J., Brismar, H., Nestler, E., Aperia, A., Flajolet, M. and Greengard, P. 2009. Norbin is an endogenous regulator of metabotropic glutamate receptor 5 signaling. Science 326: 1554-1557.
7. Online Mendelian Inheritance in Man, OMIM™. 2010. Johns Hopkins University, Baltimore, MD. MIM Number: 608458. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: NCDN (human) mapping to 1p34.3; Ncdn (mouse) mapping to 4 D2.2.

SOURCE

NCDN (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of NCDN of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-160572 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NCDN (N-13) is recommended for detection of NCDN of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

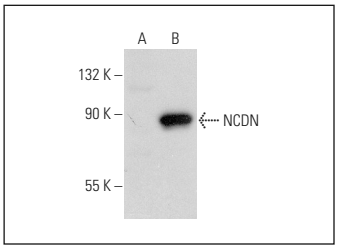
NCDN (N-13) is also recommended for detection of NCDN in additional species, including equine, canine and bovine.

Suitable for use as control antibody for NCDN siRNA (h): sc-78668, NCDN siRNA (m): sc-149854, NCDN shRNA Plasmid (h): sc-78668-SH, NCDN shRNA Plasmid (m): sc-149854-SH, NCDN shRNA (h) Lentiviral Particles: sc-78668-V and NCDN shRNA (m) Lentiviral Particles: sc-149854-V.

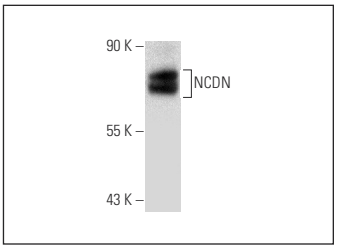
Molecular Weight of NCDN: 78 kDa.

Positive Controls: NCDN (h2): 293T Lysate: sc-159762 or KNRK whole cell lysate: sc-2214.

DATA



NCDN (N-13): sc-160572. Western blot analysis of NCDN expression in non-transfected: sc-117752 (**A**) and human NCDN transfected: sc-159762 (**B**) 293T whole cell lysates.



NCDN (N-13): sc-160572. Western blot analysis of NCDN expression in KNRK whole cell lysate.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.